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Title Page

Title: Contemporary Tendencies in Colombian Urban Planning: The Case of the 'Planes Parciales' in Medellín

Author names:

Dr Soledad Garcia Ferrari (corresponding author)

Edinburgh School of Architecture and Landscape Architecture

Edinburgh College of Art, University of Edinburgh

74 Lauriston Place

Edinburgh

EH3 9DF

Tel: +44 (0)131 651 5787

Email: s.garcia@ed.ac.uk

Dr Harry Smith

School of Energy, Geoscience, Infrastructure and Society

Heriot-Watt University

Riccarton

Edinburgh EH14 4AS

Tel: +44 (0)131 451 4616

Email: h.c.smith@hw.ac.uk

PhD Candidate Edwar Calderon

Edinburgh School of Architecture and Landscape Architecture

Edinburgh College of Art, University of Edinburgh

74 Lauriston Place

Edinburgh

EH3 9DF

Tel: +44 (0)131 651 5787

Email: edwarquitecto77@gmail.com

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Abstract

After decades of internal conflict, Colombia is experiencing a period of rapid economic growth and continuing urbanisation. It remains, however, one of the most socially unequal countries in Latin America. Medellín has been acclaimed as the most innovative city in the world as a result of recent key city-building initiatives rooted in the Barcelona model, implementing 'urban projects' such as large-scale transport infrastructures to link socially excluded areas to the city; new educational and cultural facilities; new public spaces and housing. This so-called 'social urbanism' has radically turned around perceptions of Medellín, though its socio-economic impact has been questioned. This paper focuses on the less analysed and well-known series of transformations in planning policy and management at both national and city level, which also adapted models from elsewhere through two key instruments: the Land Use Plan (Plan de Ordenamiento Territorial – POT) and the 'Plan Parcial'. The research is based on a desktop review of policies, semi-structured interviews and site visits. It examines the adaptation of these instruments to the Colombian context and investigates their application in Medellín, reflecting on how they contribute to achieving the aims of 'social urbanism'. In particular, the paper explores the differences between 'rhetoric' and practice that are reflected in those between the city's overarching plan (POT) and the content and implementation so far of the variety of 'planes parciales', focusing on redevelopment, urban renewal and urban expansion. Such differences to some extent mirror the deficiencies that are also increasingly being highlighted in the adaptation of the 'urban project' Barcelona model in Medellín, and provide the basis for a call to develop 'social urbanism' that is genuinely more socially and territorially comprehensive and inclusive.

Main Text

Introduction: From the Barcelona model to the Medellín model

Medellín is the capital of the Department of Antioquia and is located in the Aburrá Valley in the Andes, 1538 metres above sea level, with the river Medellín flowing through it. With a current population of around 2,500,000, the municipality of Medellín is the second largest city in Colombia, covering an extension of 382 Square Kms (Alcaldía de Medellín, 2006a, p. 84). The conurbation of Medellín, however, extends beyond the municipal boundaries into adjacent municipalities, bringing the population of the metropolitan area of Medellín to a total of over 3,700,000 in 2014. Nine of the ten municipalities in the Aburrá Valley (including the Municipality of Medellín) form the legally constituted Metropolitan Area of the Aburrá Valley.

Medellín has been the industrial capital of Colombia for the last few decades and recently has become an exemplar of the economic and social recovery Colombia is making after decades of internal conflict. It is becoming a 'model' of urban management that is being exported elsewhere in Latin America, much as the 'Barcelona model' it draws on, which was promoted in the region in the 1990s and 2000s. The Barcelona model has been characterised as being based on refurbishment and regeneration of central spaces, especially at the street and square scale; and the use of a large-scale project-based approach, with great emphasis on urban design, extending to the whole of the city, rather than a conventional planning approach (Capel, 2005; Monclús, 2003; Montaner, 2004). The role of social movements and citizen participation on the one hand, and the model's link to economic development on the other, have also been highlighted (Capel, 2005). However, the Barcelona model has also been heavily criticised for being technocratic and lacking in

real dialogue with citizens, for not developing an overall planning approach, and for leading to the gentrification of spaces that the authorities (in partnership with the private sector) have attempted to 'de-conflictualise' (Capel, 2005; Delgado, 2007).

Medellín applied the Barcelona model through key highly visible initiatives: large-scale transport infrastructures to link socially excluded areas to the city including the highly innovative aerial cable-cars integrated with the metro system (Metrocable); new educational and cultural facilities in the poorer sectors of the city, mostly linked to the transport system; and new public spaces and (some) housing. These localised interventions by the municipal government, which directed significant public investment towards the city's poorest areas, were the basis of what became known in Medellín as 'social urbanism' (Brand & Dávila, 2012; Coupé et al., 2012). The underlying driver has been described as 'repaying a social debt', building high-quality infrastructures in deprived areas (McGuirk, 2014). 'Social urbanism' had already been used in the 1950s by Karl Brunner, an Austrian urban planner who influenced planning in Santiago de Chile, Bogotá and Panamá in the 1930s and 1940s (Brand & Dávila, 2012). The approach, if not the term, can also be seen in other earlier initiatives in Latin America such as those implemented since the 1970s in Curitiba, Brazil, ranging from the introduction of a Bus Rapid Transit system serving all sectors of the population to the construction of small local libraries next to state schools (known as 'beacons of knowledge') (Smith & Raemaekers, 1998).

In Medellín, external perceptions of the city, which was once considered 'murder capital of the world', have been radically transformed. Internal perceptions have also been profoundly altered, and the pride that 'Medellinenses' take in their transforming city has been documented. Indeed, much of the city's urban management success has been identified by some critics as being one of perception rather than substance (Brand, 2013, 2014; Coupé, 2012; Coupé and Cardona, 2012; Ortiz, 2014). Brand (2013: 14), for example, concludes that although Medellín's 'social urbanism' was 'an imaginative, well-intentioned and expertly executed attempt to address the serious problems affecting the poor sectors of the city', its focus on urban design interventions limited its wider socio-spatial impact on the city. Brand also warns of the dangers of the city's success being used to bolster city-marketing, speculative development and gentrification in detriment of the more social focus of 'social urbanism'.

There is, however, another side to the story of the urban management of Medellín over the last two decades that is currently much less analysed and publicised, perhaps because it does not fit the narrative of the adaptation of the so-called 'Barcelona model' so neatly. As well as translating Barcelona's 'urban projects' approach to the context of Medellín, a parallel process has taken place, both at the national and at the city level, whereby a more comprehensive approach to urban planning has been legislated for and implemented. Drawing on the experience of urban planning and land management systems in Spain, Japan, France and USA (Restrepo, 2011. p.57; Alvarez, 2015 See Table 4), two key planning instruments have been adapted to the Colombian context, and in the case of Medellín these have been used in tandem with the 'urban project'-based 'social urbanism'. These urban planning instruments are the Land Use Plan ('Plan de Ordenamiento Territorial' - POT) and the Partial or Area Plan ('Plan Parcial').

This paper explores the extent to which these urban planning and land use management instruments are contributing to more equitable and sustainable development in Medellín, parallel to the perceived achievements of social urbanism's project-based approach. The purpose of the paper is to compare the POT and 'Plan Parcial' instruments in

Medellín, reflecting on how these have achieved the aims of ‘social urbanism’. In doing this, the paper adds to the limited existing literature which critiques the application of these instruments in Medellín (and elsewhere in Colombia) for being technocratic, strengthening the role of the financial sector in public-private partnerships around urban development, and favouring real estate development over providing access to housing for the poor (e.g. Ortiz, 2014). Such instruments are not the first manifestation of attempts to establish modern forms of urban planning in Colombia.

The paper first briefly introduces the adoption of modern planning approaches in Medellín. It then explains the process whereby the more recently developed planning instruments of the POT and the ‘planes parciales’ were established in Colombia during the 1990s, providing a legislative framework for urban planning and management that tends to be ignored in the narratives of the Medellín ‘miracle’. The paper then provides an analysis of the extent to which the strategic aims contained in Medellín’s POT have been addressed in the preparation and implementation of the individual ‘planes parciales’. This serves as a basis for a critical analysis of the extent to which the new planning system is contributing, or not, to achieve the aims of ‘social urbanism’. This final critical analysis draws on the themes that have emerged in critiques of the Barcelona model and Medellín model respectively, mostly focused on who benefits from these and how.

The overview of the recent developments in planning policy in Medellín draws on AUTHOR 3’s doctoral research, which included desk-top review of relevant literature and planning documents, as well as interviews with key informants who had direct experience and knowledge of the process. The account of the development and implementation of the POT and ‘planes parciales’ in Medellín draws on fieldwork, including interviews¹ with key decision-makers involved in recent planning initiatives in the city, undertaken by AUTHOR 1 during January-March 2015. The analysis of the formulation (and to some extent implementation) of the ‘planes parciales’ is based on taking the key components set out in the 2006 Land Use Plan (POT), as an expression of Medellín’s key strategic planning aims, which have remained broadly constant across all the city’s POTs and revisions prepared since the initial plan in 1999.

The content in the 27 ‘planes parciales’ which were in place by 2016 was analysed to review the extent to which each of the POT strategic aims was addressed in these, with those most often included being: *inward growth of the city*; *hierarchical system of centralities*; and *healthy land use mix*. Then three ‘planes parciales’ were selected for more in-depth analysis of how they developed an approach to these components, with such selection being based on covering the three prevalent types of ‘plan parcial’ – *redevelopment*, *urban renewal* and *urban expansion* – and on including a range of degrees of implementation. This analysis focused on gaining a better understanding of how the selected POT strategic aims were interpreted in the area-based plans and the extent to which this interpretation meets the aims as stated in the POT. This analysis allows a

¹ As part of a British Council Researcher Links project, fieldwork included interviews with a total of 20 representatives from the following organisations: Medellín Municipality’s planning department; Medellín Municipality Macroproyectos Development Unit; Housing Institute (ISVIMED); Medellín Territorial Planning Council (Consejo Territorial de Medellín); Exaedro (practitioner); Director of Plan Parcial Medellín River; Grupo UR (practitioner); academic representatives from National University of Colombia (UNAL), Antioquia, UPB and Santo Tomas Universities; URBAM EAFIT University; as well as community representatives. Interviews also included practitioners who were formerly involved in government posts such as former Director and Director of Projects at EDU. **Table 4** shows a list of the interviewees this paper draws on.

reflection in the concluding section on the relevance of more mainstream land use planning instruments such as the POT and the 'planes parciales', as well as on the barriers and limitations to their contribution to the aims of 'social urbanism'.

The resurgence of urban planning in Colombia: The Land Use Plan (Plan de Ordenamiento Territorial – POT) and the 'Plan Parcial' instrument in Medellín

Modern urban planning in Medellín started with Sert and Wiener's Plan Piloto in 1950, which incorporated Charter of Athens principles (Restrepo, 1981; Mumford, 2000; Schnitter, 2003), and was followed by the Road Plan in 1969 and the Metropolitan Development Plan for the Aburrá Valley in 1986 – a strategic 'structure plan'. However, by the end of the decade, the urban situation in Colombia (and in Medellín) remained chaotic and had become yet more complex. This led to a strong shift in state involvement in urban development. The liberal government at the time (led by Virgilio Vargas), tried to counteract land speculation by private landowners and revise the existing planning regulations. The urban reform legislation (1989) aimed to solve urban problems through the state taking more control over planning and land ownership by means of regulation (such as expropriation, penalties and eventually extinction of ownership²) (Ortiz, 2012 p204). The law also promoted political decentralisation with political/administrative regions and territorial divisions, which aided the consolidation of more autonomous municipalities and Metropolitan Areas. This approach was followed under President César Gaviria's administration (1990-94) and beyond, by a transformation of the country's development under neoliberalist models at national and local scales (Gilbert, 2014). Through neoliberal politics, the state promoted more entrepreneurial models giving the private sector further autonomy to intervene in planning policy, which resulted in fragmented urban development patterns.

The planning approach developed at this time for Medellín looked for a balanced participation of public and private sectors to achieve common goals (e.g. employment generation). The *municipalities* began to play a major role in the country's development with greater autonomy over urban development processes (Schnitter et al, 2006). Whereas the municipality was already established as the 'primary territorial unit', responsible for meeting its inhabitant's needs through participation of public, private or mixed institutions, each municipality now also took over the responsibility for development and regulation of its territory (Restrepo, 2011. p.60-61).

The constitution of 1991 also put Colombian cities on a competitive platform, measured by efficiency, effectiveness, productivity, rationalisation and optimisation; areas in which strategic planning would play a fundamental role (Restrepo, 2011. p.62). In 1994 a national development planning system was established based on Planes de Desarrollo Municipales (Municipal Development Plans) (Ley Orgánica 152 (1994) del Plan de Desarrollo). Since then, municipal development plans addressing socio-economic priorities have been mandatory for local governments. Each candidate for Mayor must present a development plan prior to elections to support their candidature, which should later be implemented during their term of office (Alcaldía de Medellín, 2011. p.181).

² Extinction of ownership is a legal instrument that the government in Colombia uses to acquire land that has been illegally purchased, e.g. with money resulting from drug trafficking.

This approach was manifested in Medellín through a separation between socio-economic goals and physical development – the former being addressed by the new (short-term Municipal Development Plans and the latter by the longer term Land Use Plans (POTs). In Medellín, it influenced a positive shift in terms of interest and investment in development of public spaces and allowed for programmes funded by international agencies. With the ‘re-involvement’ of the state in urban development, planning was expected to achieve higher community participation. However, this participation is still challenged by private and public interests, and therefore planning may show a variety of contradictions between proposal and practice.

The next landmark legislation was introduced in 1997. The main goal of the Ley 388 (1997), which addressed urbanism from a political, technical and administrative perspective, was to regulate the intervention of the private sector and strengthen the participation of the state in urban planning processes, encouraging public participation (Restrepo, 2011. p.62). Two key instruments for planning in Colombia were established through this law: the Land Use Plan (POT) and Planes Parciales (sector plans). The ‘Plan de Ordenamiento Territorial - POT is the most important instrument in the country for the organization of the territory’ (Restrepo, 2011. p.67). ‘It is defined as a set of objectives, guidelines, policies, strategies, goals, programmes, interventions and norms adapted to direct and manage development and land use’ (Article 9, Ley 388, 1997).

The ‘Plan Parcial’ is a smaller urban planning intervention unit. It is the area-based planning and procedural instrument of the Land Use Plan (POT). It is used to direct and regulate the development of portions of urban land or expansion areas of the city. While the POT relates to a municipality as a whole, the ‘Plan Parcial’ defines and classifies land uses and addresses the planning strategies to develop a specific area. Through this instrument, the POT determines where and how zones of the city should be developed (Restrepo, 2011, p.70).

The relationship between the Municipal Development Plans and the Land Use Plan (POT) is not straightforward, as there are two ways in which coordination is not aided by the way they are defined. First, the remit of the Municipal Development Plans is very broad and linked to the particular administration’s priorities. The mayors need instruments such as Planes Parciales to execute the strategic developments outlined by the Municipal Development Plans (Coupe, 2015 See Table 4). For example, the most recently proposed Municipal Development Plan for Medellín, which was out for consultation during 2016, covered citizen culture, security, social equity, education, sustainable mobility, ‘integral’ land management and recovery of the city centre, and care for the environment. Land management and city centre recovery are the areas that most directly overlap with the remit of the Land Use Plan (POT), but other areas (e.g. sustainable mobility) also have implications for the POT. Making the POT work towards achievement of the aims in the Municipal Development Plan, which are set by the political priorities of each elected administration, is hindered by a second difficulty: timescale. The Municipal Development Plan has a lifespan of 4 years, i.e. that of the incumbent local government administration, but POTs are revised only every eight to twelve years. The table below (Table 1) summarises these different scales of planning regulation.

Table 1. Hierarchy of development plans and land use plans in Colombia, with particular reference to Antioquia and Medellín, and with the planning instruments that this paper focuses on highlighted. (Source: Ortiz, 2012)

The first 'plan parcial' in Colombia was drafted for the Naranjal neighbourhood of Medellín. Since then, Medellín and its metropolitan area have had numerous 'planes parciales' which have been modified due to a variety of reasons including economic constraints and interests, access to land, local needs and planning strategies. This forms part of a trend across Colombia, where by 2013 a total of 265 'planes parciales' had been prepared across 24 cities under their respective POTs, with 50% of these 'planes parciales' (by surface area) being concentrated in five major cities: Bogotá, Medellín, Cartagena, Pereira and Cali (Ortiz, 2014). The next section introduces the context of Medellín's urban development in recent decades and examines the strategic aims contained in Medellín's land use plan (POT) – i.e. the aims for the development of the city as a whole and in the long-term – and the extent to which these have been addressed in the preparation and implementation of the individual 'planes parciales'.

Development and planning in Medellín: recent policy changes under and since 'social urbanism'

In addition to the planning instruments seen so far, a metropolitan level of planning emerged in the 1980s with the first Metropolitan Development Plan for the Aburra Valley plan in 1986 followed by the 1996 Strategic Plan for the Aburra Valley, in which the authorities began to support specific urban projects for the provision and improvement of public spaces (Jaramillo, 2005. p.167). This evolution in urban thinking was very significant for the improvement of the quality of urban space in Medellín in the following years. Since then, the local government has put an emphasis in its urban policies on the creation of public space as places for social interaction and community integration, with an overall objective of increasing urban equity; e.g. Parque de los Pies Descalzos (Barefoot Park 1998-2000). This strategic urban approach based on the development of democratic instruments for planning that allow for community participation (e.g. for the design of public space through participatory workshops) put an end to 30 years (1960-1990) of urban development with a wider focus on the construction of road infrastructure (Arango, 1991). In this context, the most important public space generator, the METRO system was inaugurated in 1995, after 10 years of interrupted construction. These large-scale projects transformed the image of the city providing highly visible public spaces and infrastructures.

Since the first one was presented in 1995, under the administration of mayor Sergio Naranjo Perez, a total of six municipal development plans for Medellín have been adopted. The initial approach was to formulate and simultaneously implement the development plans in the context of the land use plans, however, it was only during recent administrations (2004-2007 and 2007-2011) that efforts towards the integration of socioeconomic aims and physical planning were made (Alcaldía de Medellín, 2011. p.188).

In 2004, the first line of the new 'Metrocable', and aerial-cars public transportation system, was opened in Medellín to create a faster link between the informal settlements on the periphery and the city centre. Though the idea and first commission of a 'metro cable' came from previous administrations, Fajardo's administration (2004-07) made this a flagship element in their 'Social Urbanism' (Urbanismo Social 2004-2011), a policy in which inclusion of the low-income communities of the city was a key factor. The approach was based on

directing public investment to the construction of new high quality major infrastructures and buildings with a strong aesthetic impact (Davila, 2013). The aim was to conceive simultaneously physical transformation, social intervention, urban management and community participation (Ortiz, 2012).

Fajardo's administration favoured the use of alternative planning instruments to achieve this in certain parts of the city, namely the 'Integral urban projects' (Proyectos Urbanos Integrales - PUIs) (Echeverry, 2015 See Table 4). These instruments, which did not have a normative or legal base and were focused on areas that had developed informally (Montes, 2015 See Table 4), were based on incorporating multiple programmes responding to the specific needs of each area, from transport to landscaping, from street lighting to a cultural centre (Ortiz, 2014). Initial examples of PUIs were 'library parks', which were not only linked to the transport system (*Metrocable* mentioned above), but were also the result of municipal-led community participation activities – though these have been criticized for focusing on details rather than on matters of substance (Montoya, 2015 See Table 4).

Echeverry notes that the PUIs were seen as providing a means to achieve the aim of 'Social Urbanism', which 'planes parciales' could not deliver. PUIs focus mainly on articulating projects that already existed in the territory, through e.g. a public space network, a system of parks, roads, bridges, etc. However, the main objective of PUIs was community participation, and to this aim PUIs involved pedagogic integration and agreements with communities. Therefore, PUIs have a strong political intentionality and were set in place to articulate a range of projects led by the city government.

According to Jose Fernando Angel (2015, See Table 4), PUIs were an intuitive approach to strategic planning. However, weaknesses in this approach have been noted, as expressed for example by Echeverry. First was the conceptualization of these projects as completed stages. Initial PUIs should have been followed by a much more comprehensive programme for social development. Second, the implemented participatory mechanisms could have been better, particularly in terms of achieving co-creation of resulting projects, where communities could have taken a more protagonist role. Third, there was a lack of coordination between the different technical and specialist teams looking at habitat, environment, design, urban equipment, social and economic development. Echeverry's perception is that these aspects were not jointly considered in some of the largest projects such as library parks. Fourth, the environmental component in PUIs was weak and more in-depth studies could have been beneficial for protecting and improving natural systems. However, a key positive condition of PUIs was their 'holistic conceptualization' of the urban development process even if in practice this required great institutional efforts.

In addition, PUIs share with 'planes parciales', as will be seen later, limitations in terms of their geographic coverage. This has underpinned the use of a different alternative urban planning tool by subsequent city administrations, starting with Gaviria Correa's (2012-15): the 'macroproyectos'. These cover large 'strategic intervention areas', with a view to addressing urban development priorities at a larger scale than those offered by PUIs and 'planes parciales'. We will return to these in the final conclusions. However, a key final point regarding Medellín's implementation of 'social urbanism' is that internationally this is recognized mainly through its PUIs, but other perhaps less 'imageable' and less externally well-known work was also undertaken through the POT and 'planes parciales'. To this we turn next.

The land use plan (POT) and 'planes parciales' in the case of Medellín

The land use plan (POT) for Medellín

The first generation of land use plans (POTs) in Colombia were drafted between 1999 and 2001. They are based on the territorial, economic and socio-cultural development of urban areas but consider the harmony between urban development and the environment as a guiding principle.

The first POT prepared for Medellín in 1999 aimed to facilitate the configuration and articulation of public spaces, public transport systems and new centralities, as a means towards increasing access to urban services (Ortiz, 2012). Its first revision took place in 2006 (Restrepo, 2011. p.98) and the second in 2014. Maintaining the above main principles, the focus of these reviews was on management instruments and regulatory procedures. Table 2 below summarises the POT revisions in relation to each local administration in place, highlighting key instruments developed in each case. These coincide with the overarching political objectives of each administration.

Table 2. POT and Local Administrations. Source: The authors

Overall the land use plan (POT) proposes a model for the city based on limiting outward growth, densifying, providing access to services through a hierarchical system of 'centralities'³, creating a metropolitan services corridor linked to public transport and to spatial and environmental integration of the Medellín River, and achieving a 'healthy' mix of land uses.

During the administration of Mayor Sergio Fajardo Valderrama (2003-2007) there was a continuous development of 'planes parciales' in Medellín, as they were considered by local government an efficient tool for urban development in the city because it would provide a fusion between technical, political and social issues of a specific area of the city (Restrepo, 2011. p.100). . According to Juan Carlos García (2015 See Table 4), during Fajardo's administration, which oversaw the first revision to the POT, the general urban regulations were changed in relation to: 1) Land uses, 2) Buildable area and 3) Urban obligations (for developers).

At the time of the second POT revision in 2011, there were 27 approved 'planes parciales'⁴ and eight that were in the planning process (Restrepo, 2011. p.102), so the majority of Medellín's 'planes parciales' were formulated under the POT 1999 and 2006 guidelines. Article 13 in the 2006 POT set out its strategic policy goals, which continued to be based on a 'collective imaginary model' which emphasised competitiveness, environmental sustainability, social balance, a welcoming character, and a spatial and functional balance based on structuring axes and the system of centralities. The policy goals linked to this 'city imaginary' were manifested in a territorial organisation model that had the following main components, as identified in Article 12 in the 2006 POT: (1) a highly productive rural zone; (2) protected areas on the urban perimeter to prevent urban expansion; (3) inward growth

³ Although 'centralities' comes from Spanish speaking literature, in the context of this analysis it refers to a 'centre' that attracts other developments, which differs from the concepts of 'neighbourhood centre' and 'town centre' in English.

⁴ Plus an additional 'experimental' plan (Poligono Guayaquil) which was different in nature and scale to the rest of the 'planes parciales'.

of the city (re-densification); (4) spatial and environmental integration of the Medellín River; (5) a public space system that integrates the hills located within the city; (6) valorisation of the original urban structural elements of Medellín; (7) a hierarchical system of centralities; (8) restoration of the traditional city centre; (9) a medium capacity transportation system; (10) a metropolitan services corridor; and (11) a healthy and rational mix of uses. The main following components explained below, (Alcaldía de Medellín, 2006b) which relate to the nature of the area of intervention, generally defined by a central strategic location or by a rural area of expansion (Alcaldía de Medellín, 2006b). Our research identified that these components are often mentioned in the definition and proposal of 'planes parciales' that have been approved and therefore we use these components to understand what the aim has been in each case in terms of achieving the POT goals, and how/if these aims have been achieved.

Planes Parciales in Medellín

The strategic objectives set out in Article 13 of Medellín's POT were to be met through the preparation and implementation of different types of 'plan parcial', as defined in the national POT Law (Article 240 of Ley 388 de 1997):

- *Conservation* (Article 241): applicable to zones with 'urban, architectonic or landscape value' (Alcaldía de Medellín, 2006b, p. 115, Author's translation). The objective of this type of plan is the recovery, protection and/or conservation of such areas, setting limitations on the possible interventions.

- *Consolidation* (Article 242): applicable to zones with 'a tendency to well-defined and stable development' (ibid, p.116). These areas are usually developed towards densification according to their physical conditions. The guidelines for these zones are intended to consolidate the existing urban values and to correct their negative functional aspects. Some of the targets for these zones are the generation of public space, road infrastructure and community amenities according to expected population increase, as well as socio-economic mix of population.

- *Comprehensive Improvement* (Article 243): applicable to zones identified as 'Inadequate or uncompleted development areas' (ibid, p. 117), where segregated low income communities are settled. The inadequacy or incompleteness refers to precarious habitat conditions such as lack of public spaces and utilities, unhealthy housing, among others.

- *Redevelopment* (Article 244): to be implemented in 'transforming areas' (ibid, p. 118), which could be either already undergoing change, or suitable for initiation of change in strategic locations which would contribute towards the achievement of the objectives proposed in the POT, with an emphasis on optimising their potential, allowing more intensive land use and a wider variety of uses. These are expected to take a maximum of five years to implement.

- *Renewal* (Article 245): to be applied in 'deteriorated zones or zones with a functional conflict' (ibid, p. 119) that play an important role in the consolidation of the POT and have suffered environmental, physical or social deterioration. They tend to have very

fragmented plot ownership and complex social problems. These plans are expected to take 15 to 20 years to implement.

- *Development* (Article 246): applicable to ‘urbanizable areas’ - i.e. areas that can be developed - located within the urban area or expansion zones (ibid, p. 120). In both types of location, key aims are to integrate the development with the city through appropriate provision of infrastructure. Challenges with these plans included the inclusion of services, which tend to be far away from the area to be developed. Therefore, they rely on private financing and economic instability could jeopardise the success of the project.

The Medellín POT introduced the development of ‘planes parciales’ in strategic areas of the city, in central areas that require to be renovated, and in areas of urban expansion. ‘Planes parciales’ focused on intervention within selected ‘polygons’ through which the city was divided into in 1996. This instrument aimed to regulate private and public development, allowing a more equitable urban management based on the association of land owners and a fairer distribution of costs and benefits (Ortiz, 2012). According to Gaviria (2015, See Table 4), the ‘plan parcial’ was a strategy developed to address the range of plots that been generated during the building boom of the 1980s and had resulted in different levels of access to services and public spaces, with the aim of distributing these more equally and proportionally.

Medellín Municipality established a department to process ‘planes parciales’ proposals, however this team was dismantled in 2014, when a new department emerged with a focus on ‘instruments for land planning and management’. The remit of this department is broader and deals with ‘planes parciales’ as well as with macroproyectos, infrastructures, etc. Mariluz Gonzalez (2015 See Table 4) explains that ‘planes parciales’ by law require ecological, economic and mobility studies as well as socio-economic and participatory analyses. The Municipality also requires evidence of the ‘socialisation’ process, including meetings with proprietors, community organisations, residents, etc. This team was also in charge of approving technical proposals, including building areas, densities, proportion of public space, heights, etc.

Table 3 shows the type of ‘plan parcial’ that each of the plans prepared to date for Medellín belongs to. The table also notes the type of initiative (e.g. public or private), the process stage, the approval date and the administration that approved it. It is relevant to note that the majority of the plans (15), were approved during Fajardo’s government (2004-07), with only four approved during Perez and eight during Salazar’s administrations. Of the 27 ‘area plans’ analysed, only five are the result of public initiative and funding and one is a mixture of public and private investment. By early 2016 none of the plans have been completed. The most numerous category is that of ‘redevelopment’ plans (12), closely followed by ‘development’ plans (8), which include some examples of urban expansion. There are also some ‘renewal’ plans (4). It is notable that there have been only two ‘consolidation’ plans, one ‘comprehensive improvement’ plan (both of which types are the most directly relevant to providing affordable housing or improving living conditions of the poor), and no ‘conservation’ plans. In addition, one of the ‘planes parciales’ does not fit the typology set out in the POT legislation.

‘Planes parciales’ by law establish ‘social responsibilities’, with an embedded programme for protection of local inhabitants affected by the development. ‘Plan parcial’ developers also have ‘urban responsibilities’, through which public services, etc. should be

provided according to the specific needs of the 'plan parcial' area. The criticism made by local academics is that the 'plan parcial' is a useful instrument for private investment in centrally located, consolidated and well connected areas, whereas the instruments for planning and managing peripheral areas in the city have not been clear in the POT (Alvarez, 2015).

Another main goal of 'planes parciales' was to generate new housing to control informal growth, which has been one of the major problems of the city (Paola López, 2015 See Table 4). Luis Fernando González (2015, See Table 4) notes that whereas 'planes parciales' were created to improve conditions in the city, what these achieved was an improvement in the management of land to be developed for housing, benefiting the private market. González suggests that the 'plan parcial' may have become a legal instrument to maximise the land value and cost effectiveness of private development without redistributing capital gains or contributing to improving environmental quality of the city.

In addition, it has been argued that 'planes parciales' generate fragmentation due to the fact that in urban expansion or redevelopment areas these are relatively easy to implement, but this is not the case in areas that require comprehensive improvements (Angel, 2015). The solution proposed in Medellín has been the creation of 'strategic intervention areas', which have been loosely defined in the latest revision of the POT and are related to the large scale developments that can be approved by the Mayor's Office (Macroyectos) introduced earlier, and to which the paper returns in the concluding section.

So according to critics, 'planes parciales' have been problematic in their implementation as a planning instrument, but what about their coherence with the POT and their relevance to the achievement of the principles of 'social urbanism'? The next section is focused on understanding to what extent do 'planes parciales' contribute to meeting the strategic objectives set out in Medellín's land use plan (POT).

Table 3.

Classification of Planes Parciales according to their typology. Source: By the authors,

Critical analysis of the 'planes parciales' approach in Medellín

To undertake the analysis presented here, each of the land use plan (POT) components explained in the previous section, which are related to the POT goals, were identified in the information brief and planning proposals for each of the 27 'planes parciales' that have been approved in the city. Those components that were more often mentioned across all 'planes parciales' were selected for further analysis. Component 4, referring to 'inward growth of the city' was acknowledged in 25 plans; component 7, referring to 'hierarchical system of centralities', was acknowledged in 26 plans; and component 11, referring to 'healthy land use mix' was acknowledged in 27 plans. Component 4 is also one of the POT's stated strategic goals, with an intended city-wide impact as it is expected to relieve pressure on the ongoing outward growth of the city up the steep hillsides on its periphery, and component 11 is identified in the POT as contributing to this strategic goal. Component 4 appears in the

very definition of the 'imaginary of the city' at the start of the strategic goals set out in Article 13 of the POT.

Following this identification of most frequently addressed components, three plans were selected with the purpose of gaining a better understanding of how the selected POT components are interpreted in the proposals and the extent to which this interpretation meets the aims as stated in the POT. The selection of 'planes parciales' included plans that were not only approved but also under construction. In addition, each selected plan represents one of the main types of 'plan parcial' defined by the POT, and is illustrative of planning responses in different locations of the city (see Figure 1). The plans are analysed below.

SIMESA (Plan Parcial Gran Manzana SIMESA) is classified as a 'redevelopment plan'. The 30 Ha. site affected by this plan, located close to the river and on one of the city's main N-S transport routes, was occupied by industrial use spread over four large properties and a range of smaller buildings. The stated general aim of this 'plan parcial' was to link the site with the river corridor, replacing existing industrial uses with 'new production activities which are clean and compatible with other urban uses in a way which allows an appropriate mix and healthy co-existence of uses and activities which contribute to consolidating the city as a regional and competitive platform' (Alcaldía de Medellín, 2006c, p. 4). The plan developed across the four existing sites is articulated by public parks and integrate one large scale cultural facility, the Modern Art Museum for Medellín, which opened in 2016. However, the area continues in transformation with some industry expected to remove their facilities allowing for a more integrated development through newly provided public spaces (Jose Fernando Angel, 2015). The implementation of plan was totally privately funded by a total of 18 landowners.

San Lorenzo (Plan Parcial Parque San Lorenzo) is classified as an 'urban renewal plan' (though part of it is a 'consolidation plan'). This plan covers an area of 45 Ha. next to the traditional city centre with a varied topography, including three old neighbourhoods with a total population of around 22,000 people. These neighbourhoods have traditionally been predominantly residential with a mix of small scale commercial activity (shops, workshops, etc.). Deterioration in socio-economic conditions has been particularly acute in parts of the area, with settled families being replaced by 'inquilinos' (low-income temporary rental accommodation), many dwellings lying empty, and two existing cemeteries becoming derelict. The main aims of the 'plan parcial' include urban renewal and urban consolidation, with densification to contribute to repopulating the city centre, upgrading and provision of public space, and provision of commercial facilities (Alcaldía de Medellín, 2003). The plan is based on high density buildings with a low land occupation. The plan was implemented by a mix of private and public funding, with the latter including government organisations, such as Medellín's housing Institute (ISVIMED) and the city's urban development unit (EDU). A key stated challenge for this plan was that it included the relocation of existing inhabitants to other areas of the city, which generated public discontent (Carlos Montoya, 2015)

Pajarito (Plan Parcial Pajarito) is classified as a 'development or urban expansion plan'. This 236 Ha. area on the western edge of the city is one of those identified in the land use plan (POT) for urban expansion, providing 68% of housing, including 20% free housing (Juan David Mesa, 2015 See Table 4). The site was mostly agricultural or unused, with challenging topography including steep hillsides and ravines, and a small population of around 2000 inhabitants, mostly clustered in two settlements, one of which was the result

of a land invasion, Pedregal Bajo and Pajarito Central. The stated aims of the 'plan parcial' were to provide low-income housing that would help address the deficit in such housing across the city, in a way that was 'coherent and harmonious' with the rural environment, providing sustainable living and large expanses of public space (Mesa, 2015). Mesa explained that most of the land was owned by the Municipality, including a significant section of the site which had been expropriated to former Cartel dealers. Generation of employment during the construction phase was also part of the overall aim (Alcalda de Medellín, 2002). The project was implemented with public funding, managed by the city's housing institute, ISVIMED and executed through the city's development company, EDU.

Figure 1. Location of the selected case study 'planes parciales' in the city of Medellín.
Source: the authors.

In the following sections each of the selected POT components is analysed across the three case study 'planes parciales' above, exploring the way each of these components is interpreted and the response that is presented through each of the proposals. At the time this research was being carried out, the three selected 'case studies' had not been completed. Pajarito is probably the plan that appears to be closer to completion and as noted in the analysis below, there are still discrepancies between the POT components and the actual development, both on paper and on the ground.

Component 4 – 'Inward growth of the city'

Reflecting on one of the key urban expansion drivers in Medellín – the building of new formal and informal housing – the land use plan (POT) states that new developments must be oriented towards an inward growth of the city characterized by a rational use of the land, including the re-densification of central areas, to counteract urban expansion. Indeed, Article 13 of the POT identifies housing and the neighbourhood as a factor of development, integration and social cohesion, and as one of the strategic objectives of the POT. However, in the analysed plans and focusing on housing provision as a means of analysis, we find different interpretations of this component. Starting with the most centrally located plan, Plan Parcial San Lorenzo proposes the demolition of deteriorated buildings and the construction of new medium-rise residential buildings to free up the ground level for public space and community facilities, with the purpose of increasing the population density in the city centre and achieving 'inward growth' (Alcalda de Medellín, 2003a, p.3-4). This plan proposes floor area ratios ranging from 1.5 to 4 across its different zones, delivering a total of 6,902 new housing units in the sector specifically designated for 'renewal' (as opposed to the consolidation sector), giving a gross residential density of 246 units/hectare in the renewal sector (which comprises 28 Ha. of the total area of this 'plan parcial').

Plan Parcial SIMESA proposes minimising the urban expansion at the city borders. This plan proposes the creation of housing blocks separated by green areas and allows for the location of community and civic facilities within the development. It proposes the construction of 5,665 housing units over 20 years, thus giving a gross residential density of 188 units/hectare. Moving to the periphery of the city, Plan Parcial Pajarito, proposes the construction of 24,500 new housing units, mostly for low-income households, which added to the existing 500 homes would give a total of 25,000, and a gross residential density of 105

units/hectare. The latter, however, is not intended to be spread evenly across the land designated for this 'plan parcial', so net densities would be considerably higher.

An initial analysis would suggest that the parameters defined within these case study 'planes parciales' are indeed contributing to 'inward growth' through the establishment of high residential densities. This would seem the rationale for the densities proposed in the more centrally-located San Lorenzo and SIMESA. However, the case of Pajarito is more problematic. The sheer number of housing units proposed in this plan for the urban periphery would appear to go against the notion of 'inward growth' of the city. On the other hand, it could be argued that the proposed high density implies a 'containment' of urban expansion that could have spread much more extensively. If an expansion of the scale of Pajarito is necessary due to housing need in the city, then its success in terms of providing a 'liveable' expansion to the city will very much depend on how it meets the next two POT components under analysis.

Component 7 – 'Hierarchical system of centralities'

Responding to the POT aim of creating a hierarchical system of connected centralities, all the 'planes parciales' examined propose neighbourhood scale 'centralities' in the form of cultural, recreational and communal facilities for the local inhabitants. One of the main features of Plan Parcial San Lorenzo is the proposal of a civic centre – Centralidad Parque San Lorenzo – which is proposed to be located in the former cemetery area on the site. This proposal includes the conservation and renovation of the old cemetery structure due to its historical value to the city. The Centralidad Parque San Lorenzo is expected to have a social function, with communal and institutional amenities and as a location for gatherings of the local population (Alcaldía de Medellín, 2003, p.94). San Lorenzo neighbourhood civic centre is planned to be connected by pedestrian and vehicular routes to the city's administrative centre La Alpujarra. A minimum of 10% of this sector will be used for public recreational purposes (Alcaldía de Medellín, 2003, p.37a). The plan proposes the integration of La Asomadera Park, El Salvador Hill and the San Lorenzo Cemetery park through pedestrian connectivity. The new San Lorenzo Park is planned to have sports fields and playgrounds for the community that will be integrated into the existing sport facilities of La Asomadera Park (Alcaldía de Medellín, 2003, p.68b).

The interpretation of 'centrality' in the SIMESA plan is rooted in the proposal of three linear parks within the superblock (Alcaldía de Medellín, 2006, p.14). These linear parks would have a transitional function between the different land uses (i.e. separation of industry and housing). In addition they would offer a connection to other existing green areas to create a potential future green network across the city. The linear parks proposed in Plan Parcial SIMESA would integrate existing vegetation and would have three categories of communal facilities: cultural (library or museum), sports fields and educational (Coninsa Ramón H., Londoño Gómez and Arquitectura y Concreto, 2006, p.316-18)

In the case of Pajarito, the plan parcial proposes the development a new urban centrality able to provide services and commercial activities. The plan also acknowledges the need to integrate public spaces for richer social interaction as well as access to public transport. However, the proposal also highlights that Pajarito centrality is part of a 'system of centralities' which considers 'social gathering places, services, and commercial activities' in surrounding neighbourhoods. It proposes mainly the consolidation of existing 'centralities' in the area identifying the main public buildings and spaces on the site that could provide the basis for the development of this centrality (a Chapel, a sports centre, a community

centre, and a school). The plan focuses on further developing these areas extending access to public spaces but not necessarily providing spaces for new activities, such as for commercial use. Juan David Mesa explains that among the main difficulties of this plan was the ability to respond to all community demands, particularly with regards to the management and consolidation of commercial spaces.

On paper, therefore, there appears to be provision for all three 'planes parciales' to play a role in the hierarchical system of 'centralities' proposed in the land use plan (POT), based on the provision of public space, and services and amenities. The test in this case lies in the extent to which such amenities and facilities get delivered on the ground, and this is partly dependent on the land use mix that is achieved. In addition, these plans do not show the same achievements in relation to the wider system of centralities. For example, Pajarito is well connected to the central parts of Medellín, however, access to services relies mainly on the main cable-car transport link. Similarly, SIMESA with highly densified residential areas, does not include a range of services, public spaces or good transport connectivity.

Component 11 – 'Healthy land use mix'

The land use plan (POT) refers in many places to promoting a 'healthy and rational mix of uses and economic activities which are compatible with housing' (Alcaldía de Medellín, 2006b, p. 139). The POT emphasises the desirability of achieving higher diversity and intensity of economic, consumer and service activities in the centralities and along main axes. However, the POT 2014 states that in terms of healthy land use mix, the only area in the city that presents high index of 'centrality' is the traditional city centre. The POT revision proposes that an ideal land use mix should be composed of 30% residential use and 70% other uses and notes that the centrality with lower urban quality in the city is that of La Aurora, where 'plan parcial' Pajarito is located (Alcaldía de Medellín, 2013).

Plan Parcial San Lorenzo proposes a mix of uses including commercial premises in the area, particularly in order to stimulate the local economy. However, this has not been completed yet and the priority appears to be the development of social housing, so the extent to which a mix of uses is achieved remains to be seen. Plan Parcial SIMESA is perhaps the plan that shows more emphasis on the provision of mixed land uses. According to Decree 124 of 2006, every single block of this 'plan parcial' should guarantee the following distribution of areas: a) a minimum of 40% for uses other than housing but related to the Metropolitan Services Corridor activities; b) 40% of the area may be used for housing, however this is not obligatory and could be combined with other allowed uses in this area (i.e. light commerce); and c) the remaining 20% of use shall be determined by the Planning Office of Medellín when the area has been developed to at least 35% of its total (Alcaldía de Medellín, 2006c, p.43-44).

With regards to land use, Plan Parcial Pajarito is based on high density housing with creation of public spaces around pre-existences (e.g. an existing church) and the provision of new civic and educational facilities. Commercial activity appears not to have been catered for, at least in the initial stages of development, and this has led to its emergence on the site in a more spontaneous manner, with shops appearing within flats on different levels throughout the development. A small block for commercial use is currently being built on the site, however a clear strategy for land use mix is not evident in the proposal, and this is affecting its provision on the ground. A key challenge identified by Juan David Mesa was that the plan involved the relocation of a problematic community affected by conflict and crime in other area of the city, without considering social monitoring and services. He also states

that the plan did not provide high quality public space and it is perceived to be disconnected from the city. This is supported by Jose Fernando Angel, who also notes that the lack of public space in the area generated a range of dispersed, isolated buildings, which is not helped by the steep geography of the site.

The 'planes parciales' and their role in meeting the land use plan (POT) strategic objectives

Reflecting on how the case study 'planes parciales' illustrate the instrumentalisation and implementation of the POT's key components (as well as on other examples identified above and studied by the authors), the following considerations can be made.

Inward growth of the city (re-densification): The objective of inward growth of the city is to an extent counteracted by a number of high density housing projects at the urban perimeter (regulated by *Planes Parciales de Expansion*), and therefore Medellín has not been growing inwards as stipulated in the POT. The Altos de Calazans and Pajarito 'planes parciales' are clear examples. Instead, the urban periphery plans have been developed more readily because their results were more profitable and easier to manage for developers. This contradiction may also have been fostered by the fact that urban expansion land tends to be cheaper than land within the central urban area. In addition, any intervention within the city (urban renewal) would require more technical support and result in less architectural and planning "flexibility". A key point in relation to this component is the complexity of the social and economic fabric of central parts of the city, which requires an approach that integrates a range of actors and institutions as well as establishing alliances among these and with communities. The question would be whether the 'plan parcial' as a development tool allows for these interactions to take place in areas with extreme social complexity.

Hierarchical system of centralities: This component is particularly dependent on good articulation between identification of the overall hierarchy of centralities in the POT, and detailed development of these within the separate 'planes parciales'. This is a challenging proposition, as in-depth understanding of the potential of each area to provide (or not) some form of 'centrality' is only fully reached when the respective 'plan parcial' is developed. An added difficulty is the achievement of 'centralities' in practice, as illustrated in the cases of both San Lorenzo and Pajarito, where housing construction has taken precedence over provision of services and facilities. In this context, the POT 2014 revision states that whereas the more balanced areas in relation to provision of housing and local access labour are in the central part of the city and along the river, it is possible to achieve a range of zonal 'centralities'. However, these are not fully integrated at the city scale with a clear hierarchy of uses responding to the characteristics and needs of each neighbourhood.

Healthy land use mix: Healthy mix of land uses versus monofunctional zones shows another dichotomy between plan and implementation in Medellín. The analysed 'planes parciales' state that they will provide mixed land uses, understanding a healthy mix of uses as the main characteristic of the POT proposed system of 'centralities', but there is diversity in how this is interpreted and implemented. In addition, in 2006, under Fajardo's administration, Medellín returned to the rigid zoning of the 1950s. This backward movement was a failure of the "*sana mezcla de usos*" (healthy mix land uses) and "growing inwards" (densification of the existing city instead of expanding it) proposals of the initial land use plan (POT) in 1999. According to Juan Carlos Garcia (2015), in 2006, there were changes in

the POT that stimulated rigid zoning based on the implementation of the CIU Code⁵ which protects industry in all areas of the city and avoids land uses mixture. In addition, he emphasized that local cultural aspects such as conflicts generated between landowners by the mixed land uses were another reason to return to the mono-functional approach.

Overall the 'plan parcial' does not seem to be tackling some of the overarching problems in the city such as inequality, access to public spaces, mobility infrastructure, urban equipment, etc. The 'plan parcial' can be conceptualised as a development instrument based on capital gains from land speculation. In this context, Luis Fernando Gonzalez notes that if the city 'vision model' is based on an economic model, instead of a model focused on its citizens, social conflict will not be confronted. According to Cecilia Moreno, the integrated vision of the POT has been lost through fragmented action via 'planes parciales'. The main challenge for the 'planes parciales' has been the ability to integrate with the existing social fabric and address the challenges of local inhabitants in the areas of intervention.

Final reflections and conclusions

The purpose of this paper is to look critically at the current urban planning approach in the city of Medellín and to gain further understanding of the experience in this city beyond the much publicised 'social urbanism' approach. The paper has focused on the recent development of urban planning in Medellín including the establishment of its first land use plan (POT), facilitated by national urban planning legislation in Colombia, and on how the aims of the POT are being applied and achieved through proposals in recent 'planes parciales'.

The land use plan (POT) proposal of limiting outward growth, densifying, providing access to services through a hierarchical system of centralities, and achieving a 'healthy' mix of land uses faces several challenges: (a) coordination with the socio-economic aims set out in municipal development plans that are prepared by each 4-year long municipal administration; (b) detailed development through the geographically-defined 'planes parciales'; (c) constraints to implementation due to limitations in access to resources, but also due to the ever-changing socio-economic reality (e.g. the aim to limit outward growth is evidently trumped by continuing informal settlement on the periphery, in increasingly hazardous locations) and to political and economic pressures (which may lie behind some of the high density developments – at both low and high ends of the market – on the urban edge); and (d) coordination with other municipalities, into which the Medellín conurbation extends.

Analysis of challenge (b) in this paper, i.e. the detailed development of the land use plan (POT) through 'planes parciales', shows that the tensions highlighted in challenge (c) manifest themselves at this level. The 'planes parciales' need to define key parameters such as specific percentages and locations of uses, floor area ratios and densities – all of these being factors that have monetary value to investors and homeowners, and that have direct impacts on the livelihoods and quality of life of residents. The 'planes parciales' also require a high degree of technical (and technocratic) input that requires appropriate capacity to deliver, and are thus demanding due their aim to collectively cover all of the territory regulated by the land use plan (POT). In addition, the fact that the 'planes parciales' are based on geographically defined areas creates internal boundaries within the city in terms of

⁵ International Standard Industrial Classification (CIU), this code, which was implemented for the UN to classify industrial activity, was used to classify and organize land uses in the territory.

its development, with 'planes parciales' in areas of expansion leading to less complex processes than inner city 'planes parciales'.

In addition, the 'plan parcial' as a planning instrument has a built-in fiscal component that is intended to capture the betterment value generated by the development the area-based plan proposes (measured on the basis of the key parameters referred to above). This is to allow funds to be raised to invest in infrastructure and facilities provision within the area defined by the 'plan parcial'. However, the way the area that each 'plan parcial' area is defined has an impact on the potential for such value to be captured, reinvested and redistributed. This has implications particularly for informal areas of the city, where 'social urbanism' seeks its highest impact. Firstly, the betterment value in 'plan parcial' areas defined within informal settlements will be limited, thus restricting funds that may be generated internally within the area for infrastructure provision. Secondly, the private sector – which has been identified as a key partner in the implementation of 'planes parciales' through public-private partnerships (see Ortiz, 2014) – has little incentive to take part in interventions in such areas which, as well as being difficult to work in, offer limited financial return if implemented in a way that is focused on providing housing to the existing low-income residents. This raises questions around the variety of socio-economic conditions that should be included within the boundaries of a 'plan parcial', and more fundamentally around whether a 'plan parcial' is the appropriate planning instrument to achieve 'social urbanism' within informal areas, where neighbourhood upgrading may be more appropriate (e.g. using 'regularisation plans', a legal instrument that is also available to Colombian planners – see Table 1).

A possible response to this may be offered by the recent initiative by the Municipality, as a result of the 2014 revision of the POT. This is the definition of 'macroproyectos' referred to earlier in the paper, which cut across geographic and instrumental boundaries. All 'macroproyectos' are linked to green infrastructure – e.g. a linear park along the river, a greenbelt, etc. Each 'macroproyecto' can be divided into smaller territorial units, which may include a 'plan parcial'. The 2014 POT revision understands the advantages of considering larger portions of the city as main territorial units in order to better distribute the benefits and financial obligations of any small-scale local plan (such as a 'plan parcial') across these broader areas. However, the identified dangers of this approach relate to the fact that 60% of the urban area of Medellín has been associated to 'areas of strategic intervention' for the development of five major macroproyectos.

Considering the difficulties with regards to implementing improvements at the scale of the 'plan parcial' due to the complexity of existing urban and social fabric, it may be concluded that this complexity will only increase in scale, through the implementation of 'macroproyectos'. However, existing political interests on this approach defend the opportunities this planning instrument brings about for an integrated approach to planning the city, as well as the possibility of having more flexibility with regards to betterment in a larger urban portion. According to Luis Fernando Gonzalez, if the objectives from the government continue to focus on land-use planning and development based on an economic development model, it will not be able to resolve the increasing social conflict in Medellín. The other side of the argument poses that macroproyectos will allow larger scale interventions not only in terms of reflecting about structures at the city level, but also in relation to financial management, as the urban responsibility to share with the city a proportion of the capital gained through the development, will be distributed across a larger number of operators, including public, private sector and communities. Further research

could focus on the actual benefits of macro-units as they present highly complex social, spatial and political contexts.

To conclude, while the 'urban projects' and 'social urbanism' have achieved highly visible and acclaimed outcomes through strategic interventions in specific locations, the land use plan (POT) and its implementation through 'planes parciales', though much less widely known, is arguably faced with a more difficult task of coordination and of dealing with changing realities on the ground as well as pressures from political and economic interests in the development of the city.

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